

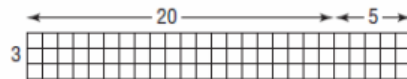
5.5

Multiplying and Dividing a Polynomial by a Constant

FOCUS

- Use different strategies to multiply and divide a polynomial by a constant.

How does this diagram model the product 3×25 ?



What property is illustrated by this diagram?

How could you use the diagram above to model division?

DIVIDING ONLY

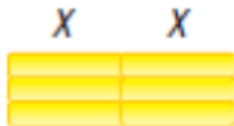
Sep 22-9:41 PM

Connect

Multiplication and division are inverse operations. To divide a polynomial by a constant, we reverse the process of multiplication.

The expression $6x \div 3$ is a division statement.

It represents the quotient of the monomial, $6x$, and the constant 3.

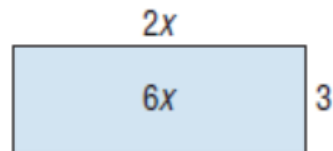


Sep 30-12:53 PM

Connect

Multiplication and division are inverse operations. To divide a polynomial by a constant, we reverse the process of multiplication.

We can also model $6x \div 3$ as one dimension of a rectangle with an area of $6x$ and the other dimension 3.



Sep 30-12:53 PM

Example 2 Dividing a Binomial and a Trinomial by a Constant

Determine each quotient.

a) $\frac{4s^2 - 8}{4}$

b) $\frac{-3m^2 + 15mn - 21n^2}{-3}$

SOLUTION:

a) $\frac{4s^2 - 8}{4}$

Use AlgebraTile

Distributive Property

Sep 22-8:25 PM

Example 2**Dividing a Binomial and a Trinomial by a Constant**

Determine each quotient.

a) $\frac{4s^2 - 8}{4}$

b) $\frac{-3m^2 + 15mn - 21n^2}{-3}$

SOLUTION:

b) $\frac{-3m^2 + 15m - 21n^2}{-3}$

Use AlgebraTile

Distributive Property

Sep 22-8:25 PM

YOU TRY!

Determine the Quotient

$$\frac{6x^2 - 3x}{3}$$

SOLUTION:

Use AlgebraTile

Distributive Property

Sep 22-8:25 PM

YOU TRY!

Determine the Quotient

$$\frac{4b^2 + 12bc - 8c^2}{-4}$$

SOLUTION:

Use AlgebraTile

Distributive Property

Sep 22-8:25 PM

Discuss the ideas

2. Why can we not use algebra tiles to divide when the divisor is negative?

Reflect

How are multiplying and dividing a polynomial by a constant related?
Use examples to explain.

Sep 22-9:21 PM

Practice

Page 246 # 4,6,8

Page 247 # 13, 14, 16

Page 248 # 18,20,23

If Finished in class then attempt these questions

Page 248 # 24